

Subject: glowbugs V1 #147

glowbugs

Thursday, October 30 1997

Volume 01 : Number 147

Date: Wed, 29 Oct 1997 10:36:53 -0500 (EST)

From: rdkeys@csemail.cropsci.ncsu.edu

Subject: Re: Grandma Hartley funzies.....

> Good evening!

Yeah, it was a pretty good evening, except for the antenna blowing down and a frenzied rush to throw something up into the trees.....(:+)}.....

> The 599 was honest, although some fades took it down to about 549 -- No =
> doubt about the T9 though -- good, monotone note with just a hint of =
> instability on the make. Not a chirp -- more like the chiff you hear in =
> a pipe organ in the millisecond before the pipe speaks.

I like that..... Grandma Hartley sounding like a pipsqueek pipe organ.....
The skip was in, for a 599.....(:+)}.....

I still have to twiddle her a bit more, though, something is not quite
T9 on some of the reports I have gotten lately.

I changed the coupling from a 3 turn link down to a 1 turn link and made the primary circuit a series-tuned network with an extra C to gnd on the output side. The power output went up considerably as the match to the random wire was made better. But, right at maximum output the note begins to get a trace of AC hum modulation. I may not have the feedback tap set just right. It currently is at midtap on a 12 turn coil of no. 10 wire about 2.5 inches in diameter (coil from a BC-375 tuning unit around 10 mhz) and the pickup link is spaced about 1.5-2 inches from the main coil. By tuning the primary lower in frequency (to a longer wave), and dropping the power down about 15% from max, it stabilizes and the note clears up. I sense it may still be very slightly overcoupled and I may have to make up a bracket of some sort to space the link another half inch or so further from the main coil.

But, for a 29 Hartley running a 50 watter bottle, she is not really all that bad in her note. I tend not to push her very much, and run her at around 20 watts input, with around 7 watts max output (she sounds best at 5 watts output for some reason --- A QRP lady, she be). That is about 1/4 to 1/3 efficiency, which is good on a self-controlled oscillator with stability and a clear note in mind.

> Also rock solid in frequency over the ten minutes I listened to you. =20

She does not drift much, but about 50-100 cycles from the start of keying for about 10-15 seconds and then it seems to stabilize. My guess is that the dynamotor is pulling down slightly under load, in rotational speed. I can hear a slight decrease in pitch of the motor whine, under load. I have no easy way to fix that, unless I were to find a bigger mg set or wire up the 12 volt bus with no. 000 wire.....(:+)}.....

I was on last night, but only able to work N4QY about 100 miles away. I heard Sandy and Whit and a few others on, but could not work them.

Mebbie, tonite!

73/ZUT DE NA4G/Bob UP

Date: Wed, 29 Oct 1997 10:38:55 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Re: Grandma Hartley funzies.....

> Last nite I had the new Hartley on the antenna for some quick tests
> with a buddy across town to have him monitor for signal quality
> (key clicks, etc). I was not in a position to get into any QSO's
> but I did hear W5FRS calling CQ BA. Was 599 here even though I had
> the 30dB atten turned on on the TS-930 that I was using to monitor.

Well.... don't keep us on pins and needles..... what DID she sound like?????

Bob/NA4G

Date: Wed, 29 Oct 1997 11:11:30 -0500
From: bgriff@develcon.com (Bill Griffith)
Subject: Re: GB Play QRGs of Consensus.....

I'm a relative newcomer to the hobby, but I now appreciate the investment that most of you have in colour-burst rocks and rock-bound rigs, so I suppose 3579kcs will always be the most popular gb/QRP freq. Besides, the QRM makes it more of a challenge, right ? (If it was easy, it wouldn't be fun).

BTW, a few years ago I considered building an 80meter beacon for 80m fox-hunts and NVIS antenna experiments for ARES - guess which frequency I chose.

73,
Bill VE3WGX
>

Date: Wed, 29 Oct 1997 10:20:37 -0600 (CST)
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: Grandma Hartley funzies.....

On Wed, 29 Oct 1997 rdkeys@csemail.cropsci.ncsu.edu wrote:

> Well.... don't keep us on pins and needles..... what DID she sound like?????

Well, over the phone it sounded pretty good. However he was getting a wierd very low freq beat in there maybe 1/10 cps, That sounded real strange. I did not hear it in the monitor here. So I fired up the TS-930 and he heard a similar sound along with QSB - and he is only about 3 miles away. Methinks the Auroral gods were playing tricks.

I have been home the last couple days fighting a cold but hope to actually try a QSO maybe tonight on the 80 meter BA freq.

UFO's are real! (It's the Air Force that does not exist)
E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI
CIS: Data / Telecom Aurora University, Aurora, IL
630-844-4898 Fax 630-844-5530

Date: Wed, 29 Oct 1997 12:19:38 -0500 (EST)
From: rdkeys@csemail.cropsci.ncsu.edu
Subject: Re: Grandma Hartley funzies.....

> > Well.... don't keep us on pins and needles..... what DID she sound like?????
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> wierd very low freq beat in there maybe 1/10 cps, That sounded real
> strange. I did not hear it in the monitor here. So I fired up the
> TS-930 and he heard a similar sound along with QSB - and he is only
> about 3 miles away. Methinks the Auroral gods were playing tricks.

It might be the ethereal bugs at work, but it could also be the set.
I have been hearing some flutter on the QRG, lately, but also get some
in Grandma on occasion.

I get the same thing with Grandma when I get the coupling a little more
tight than it might be. Generally, I tune the output circuit a little
low in the wave and that clears up the note. I get what sounds a bit
like a lf beat hum, but not exactly.

One of two things might be happening. 1) it is actually oscillating
at two close frequencies, determined by the LC of the antenna and the
plate circuits, with the plate circuit having dominance by a goodly
margin, dependant upon the degree of coupling between the antenna and
plate circuits. The beat gives it a sort of an lf hum modulation.
2) it is picking up hum modulation somewhere that does not show until
the load gets peaked.

In Grandma's case, it seems to be highly dependent upon how closely the
antenna circuit is tuned to resonance with the plate circuit, and to a
lesser extent the degree of coupling.

I don't exactly understand why it is happening. I do get it more under
heavily loaded condition than lesser loaded condition. That was leading
me to believe that it may have to do with the position of the cathode
tap, under load..... more coupling, closer antenna circuit/plate circuit
resonance and the optimum cathode tap position may change a little.

I get a T8.5 report out to about 100 miles or so, and then the T9 comes in,
which indicates that the percentage of the signal carrying the hum or
beat or whatever it is is quite low, and easily lost in the QRN.

I read in the 1928 handbook, or somewhere like that, that the proper exactness
of center-tap in the filament transformer or the filament circuit (i.e., the
net unbalance of it on 60 cycle filament power) can cause that kind of hum

modulation. Whether or not that is related to the tunable load hum, I dunno. Methinks not exactly, since I run my filaments on DC. But, it is not a pure DC since it is only coming out of a brute force power supply which runs the filament and the dynamotor. I am sure a few percent of hum is there on the DC bus.

If anyone has any more specific ideas of what could be happening, do holler.

If you could, as a test, series the filaments in the two tubes, and then use the center as the center tap, and power the filament with a 12 volt battery, and see if the hum/beat is still there, or is affected under load or by tuning. If it is clean, it is atmospheric and not Grandma's little affliction.

It sounds like you have a fine set, there, for sure, and a welcome addition to the BA/GB QRG to Grandma Hartley. Nows we just needs get a few more up for the season! I hear tell there be a few more Hartleys in the works, amongst the GB crewe.....(:+)}.....

> I have been home the last couple days fighting a cold but hope to
> actually try a QSO maybe tonight on the 80 meter BA freq.

Hey, do it! I will be there after 0300Z.

73/ZUT DE NA4G/Bob UP

Date: Wed, 29 Oct 1997 12:00:01 -0800 (PST)

From: Ken Gordon <keng@uidaho.edu>

Subject: 3579 QRG...Tuesday night...

Also worked N7TM, Tom in Redmond, Washington about 0600, 57/89 both ways.

Gee, more people on 3579 than I thought possible. While Tom and I were chatting, I heard a weak signal which MAY have been trying to break, but when we stood by, there was no response.

Gosh! Four contacts on the BA QRGs in one night. Be still my beating heart!!!

Ken W7EKB

P.S. The TV set noise was NOT a problem since none of us were zero-beat with it. Perhaps a little judicious tweaking or more careful listening will be all that is required to make 3579 a decent QRG.

Date: 29 Oct 1997 13:59:11 -0600

From: "Brigham, Scott (MN10)" <Scott.Brigham@HBC.honeywell.com>

Subject: [none]

Greetings to glowbugs everywhere! I think this may be my first post to the list, although I have

been a member for about a year and have posted a few times to the BA list. I have also chatted with several folks via email on various topics.

An introduction is in order:

My name is Scott Brigham, QTH St. Paul, MN USA. I'm 39 years old and got my novice license in high school in 1975. Since I couldn't afford much in the way of gear, my first transmitter (which I still have) was a good old Johnson Viking II that I got for \$20, which was paired up with an R-392 from Fair Radio. Thus began my love affair with all things vacuum-tubey. I now have several Johnson transmitters laying about in various stages of functionality as well as other boatanchor-type gear.

But now for the glowbug-related topic!

I love the sound of my Viking Ranger on CW and there has been a plan brewing in the back of my mind for a while to build a little QRP transmitter loosely based on the Ranger's circuitry. I started in with paper, pencil and books last night. The plan is to use the Ranger's 6CL6 crystal oscillator circuit and grid-block keying, and run that to something like a 6AQ5A amp for about 4 watts out. I am planning on making it a single band (40 m) rig, or maybe an 80/40 dual-band. I'll keep the list posted on its progress and if it works out well I'll try to persuade Bry (hi Bry!) or someone else with a web page to stick up schematic, pictures, etc. I may get real exotic and put in an antenna relay/receiver mute relay.

Now, some thoughts, questions and observations that I have collected on my journey so far (comments welcome!)

1. The 12AU7 tube used for keying in the Ranger doesn't look like it is actually used for keying the stages beyond the 6AU6 VFO (which I won't have). It looks like the keying is just using an RC network to apply the grid block voltage to the 6CL6 and that the cathode current for the right half triode is used to affect the left-half triode that keys the 6AU6. My vacuum tube prowess is pretty low, so forgive my relative ignorance. Any Ranger owner/fans please comment!
 2. In regards to nice keying on QRP rigs - I was reading through the sections in my 1963 ARRL handbook on keying and they mentioned the obvious but apparently never used concept of having the oscillator running continuously during transmit and keying the amp stage. Anybody doing this in their homebrew rigs?
- Keying the oscillator is only necessary for full break-in and from listening to the bands, I have NEVER heard any QSO going on the sounded like people were using full QSK.
3. I used to build little power supplies for every project, but recently I picked up a Heathkit supply, the one that is used for the HW-101, etc. It supplies +275, +800, -130, an adjustable bias

voltage (-40 to -80) and 6.3 VAC. I plan on building the "MicroRanger" so that I can plug this supply into it and enjoy the luxury of having the negative voltage available for the grid-block keying. If you're looking for a good general purpose supply, keep an eye out for one of these.

That's it for now. It feels good to surface and actually start participating in the list. I have been reading it faithfully for some time and feel like I know many of you already!

Scott E. Brigham (K0ZI)
St. Paul, MN USA

Date: Wed, 29 Oct 1997 20:34:41 +0000
From: Sandy W5TVW <ebjr@worldnet.att.net>
Subject: "500" going again!

I'll have the old Viking 500 back on 3579 QRG tonight. I decided to try and repair the choke that blew. Had to disassemble it and pull the winding from the lamination stack. "Operated" on the flashed over cardboard bobbin (Actually did a 'bobbinectomy') Next unwound one damaged layer of the #23 wire & spliced with existing lead. Reinsulated with Scotch #23 HV rubber tape strips. Wounds about 4-5 layers of #23 Scotch rubber tape around the core followed by 2 layers of wide friction tape as a "shim". Reassembled the choke using strips of #23 in strategic areas prone to "flash over" to the core. "Meggered" with a General-Radio 500 volt megohmmeter and found no leakage. (Was actually about 150,000 megohms). Reinstalled in transmitter and so far, so good. It "hums" faintly under load, but who cares! Hopefully, the "repair" will hold up OK!

73, CU on 3579 if conditions permit!

E. V. Sandy Blaize, W5TVW
"Boat Anchors collected, restored, repaired, traded and used!"
417 Ridgewood Drive
Metairie, LA., 70001

860 Hartley 'ECO' under construction**

Date: Wed, 29 Oct 1997 17:15:00 -0600
From: Alex Mendelsohn <alexmx@pennwell.com>
Subject: RE:

Scott:

The Viking rigs used differential keying, which is described in some of the 1950s handbooks. Essentially, when you close the key, the oscillator starts, then--after a short time period--the amplifier is keyed. Upon key-up, the

amplifier turns off, and then--after a delay--the oscillator is turned off.

That way, the oscillator stabilizes before the PA is keyed, and no chirp is detected at the TX's output. It's a pretty neat way to fly.

Vy 73, AI2Q, Alex in Kennebunk, Maine .-.-.

From: Brigham, Scott (MN10)
To: ALEXM; Return requested
Date: Wednesday, October 29, 1997 4:17PM

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Scott E. Brigham (K0ZI)
St. Paul, MN USA

Date: Wed, 29 Oct 1997 16:57:01 -0500
From: "Ornitz, Barry L" <ornitz@eastman.com>
Subject: RE: QSK

Allow me to welcome Scott Brigham here. I have known Scott for several years and I miss seeing him at the University of Tennessee Measurement and Control Engineering Center (as well as a few other Rosemount folks too).

In regard to keying and full QSK, you may not hear it often on the ham bands but if you have experienced it in a CW traffic net, you never want anything else. It is almost like full duplex speech with experienced operators. In the dim past, I saw a special hand key made with an extra set of contacts just for QSK work. These extra contacts were set to close slightly before the main key contacts and open slightly after the main contacts. These extra contacts were used to key the oscillator such that it was operating a few milliseconds before the power amplifier stages keyed and remained operating until a few milliseconds after the power amplifier stages were turned off. I think the term used to describe this technique was differential keying. I believe some of the military transmitters of WWII had special relays designed for this sequencing too.

Doing all this transmitter sequencing with vacuum tube circuits is not

extremely difficult but it is rather complex for a QRP rig.

We're glad to see you surface, Scott. With all the interesting ideas for projects here, it will be difficult to keep from trying at least a few...

73, Barry L. Ornitz WA4VZQ ornitz@tricon.net

Date: Wed, 29 Oct 1997 16:32:42 -0800 (PST)

From: Ken Gordon <keng@uidaho.edu>

Subject: My HW-16...

still chirps. I have two components to change or adjust: the .001 mfd cap which connects the plate to the crystal, and the 47k grid leak.

After that, I am stumped.

Dang. I just want it to sound more like Jack's (W7QQQ) one tube 35 watter.

Ken W7EKB

Date: Wed, 29 Oct 1997 17:58:13 -0700 (MST)

From: Jack Meadows <jackmead@getnet.com>

Subject: Re: My HW-16...

On Wed, 29 Oct 1997, Ken Gordon wrote:

> still chirps. I have two components to change or adjust: the .001 mfd cap
> which connects the plate to the crystal, and the 47k grid leak.

>

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> Dang. I just want it to sound more like Jack's (W7QQQ) one tube 35 watter.

>

> Ken W7EKB

>

>

Ken,

I think it is the most nostalgic, best soundin chirp I've heard!
Sure made your signal stand out in all the QRM for easy copy on my
wide, 6 kHz bandwidth, Hallicrafters SX-140. Keep it! :)

CW tones sound beautiful on a wide bandwidth receiver like the SX-140.
I have a large speaker hooked up, and enjoy the beautiful tones that
are missing on the modern rig.

Think I'll go listen to them on 7050 and 3579.

Best regards,

Jack W7QQQ

Date: Wed, 29 Oct 1997 18:27:43 -0600 (CST)
From: Kevin Pease <hamradio@mm1001.theporch.com>
Subject: Re: 3579 QRG...Tuesday night...

On Wed, 29 Oct 1997, Ken Gordon wrote:

>

> P.S. The TV set noise was NOT a problem since none of us were zero-beat
> with it. Perhaps a little judicious tweaking or more careful listening
> will be all that is required to make 3579 a decent QRG.

>

I only notice the qrm when in my bedroom with the 40 meter dipole shoted out and connected to the ant term with the other ballanced terminal grounded and then it is not too bad. The homebrew glow bug rig is so selective that I almost never hear it with that rig.

Which brings up another good point. That rig is so elective that it is makeing it dificult to roundtable since I need to re-tune the rig for every signal since we are all spread out abit in frequency. I may put a cap in paralell withe the burst xtal and lower its freq to be closer to everyone else so that I can minimize the constan re-tuning.

Kevin Pease
WB0JZG
Mount Juliet, TN.

Date: Wed, 29 Oct 1997 22:32:18 -0600 (CST)
From: Bob Roehrig <broehrig@admin.aurora.edu>
Subject: Re: Grandma Hartley funzies.....

Well, the new Hartley was christened tonight with a QSO with Jim, W8ZR. Earlier today it was breezy enough that all my antennas were swinging so much that the signal would have been wobbling all over the band but it was calm and steady tonight.

A lot of QSB and some QRN so the QSO was short - heard others complain of lousy conditions too. Other BAers heard were N4QY, N4ULL, WS4S, W5TVW, W5FRS, and W7ZFB. Knowing that some of these folks were runing powers of several hundred watts and none of the sigs were outstanding, I did not try any much further with my 15 watts except for calling a couple of CQ's (unanswered).

The freq can get pretty busy at times, and not everyone wants to get involved in big roundtables, so how about those that can QSY also listen down maybe to 5KC lower so more of us can chat at the same time. I always listen down to at least 10KC lower.

UFO's are real! (It's the Air Force that does not exist)
E-mail broehrig@admin.aurora.edu 73 de Bob, K9EUI

CIS: Data / Telecom Aurora University, Aurora, IL
630-844-4898 Fax 630-844-5530

Date: Thu, 30 Oct 1997 08:44:35 -0800 (PST)

From: Ken Gordon <keng@uidaho.edu>

Subject: Re: My HW-16...

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Well, Thanks, Jack. That is very kind of you.

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> are missing on the modern rig.

>

> Think I'll go listen to them on 7050 and 3579.

>

> Best regards,

> Jack W7QQQ

Your little one-tuber sound literally beautiful to me. Very sweet tone.

Ken

End of glowbugs V1 #147
